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United States Department of Agriculture
Animal and Plant Health Inspection Service

Program Aid No. 7143

The Sentinel Tree Survey Program

*Standing
Guard*



Introduction

The Sentinel Tree Survey Program is a voluntary monitoring system managed by the U.S. Department of Agriculture (USDA) and designed to track the occurrence of citrus canker at the earliest stage possible. These early detections through regular inspections will keep the spread of disease to a minimum. This is a residential survey of selected sentinel trees—not a grove survey—and takes only a few minutes.

USDA's Sentinel Tree Survey Program: Early Detection of the Disease

Government researchers at the U.S. Horticultural Research Laboratory in Fort Pierce, FL, led by plant pathologist Timothy R. Gottwald, have developed an early warning system for spotting new outbreaks that uses a sentinel tree grid (fig. 1) to detect and help prevent the further spread of citrus canker. The grid is formed by dividing each square mile into a 12-by-12 grid of 144 subsections. A sentinel tree is selected for repeated survey in each subsection.

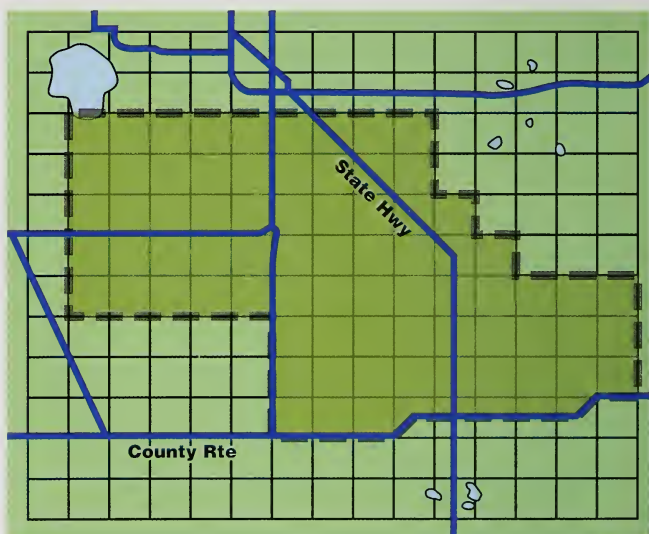


Figure 1—By visually surveying 1-square-mile grid areas every 60–90 days, inspectors can identify new citrus canker outbreaks and destroy infected trees quickly. The Sentinel Survey Program is based on grids like this one.

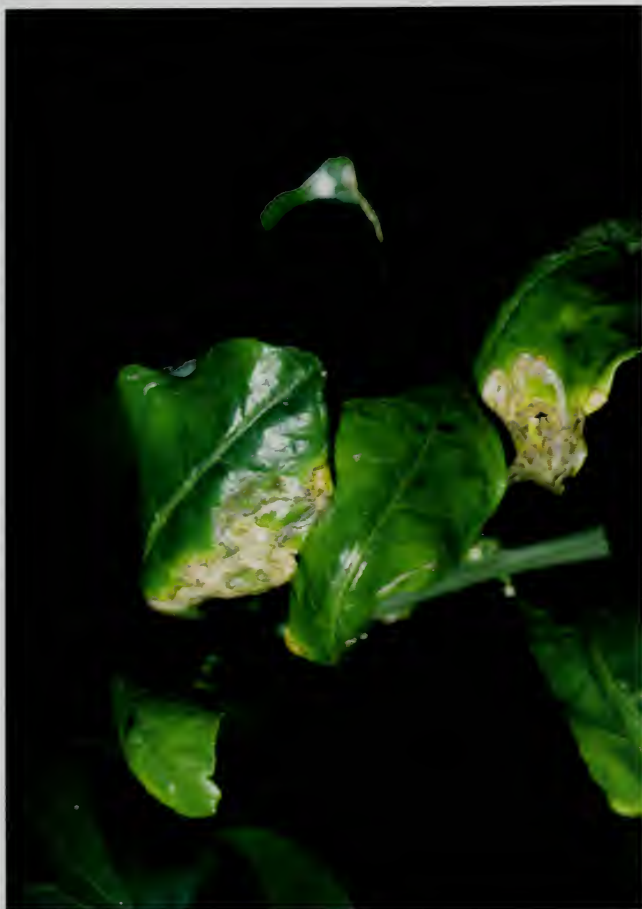


Figure 2—Citrus canker is a disease that causes lesions on the leaves, stems, and fruit of citrus trees. This photo illustrates infected citrus leaves.

By visually surveying the 1-square-mile grid areas every 60–90 days, inspectors can identify new outbreaks and destroy infected trees quickly. The sentinel tree grid started in South Florida and, as of September 2002, has been introduced into 28 of the 34 counties where citrus is grown commercially. Across the State in residential areas, the Sentinel Survey program lessens the likelihood of undetected citrus canker disease. The tree grid model has already helped agricultural inspectors detect several new infections that might have gone unnoticed until a more serious and widespread infection had developed.

Tagged Trees

Once the Sentinel Survey office has your permission as homeowner, the selected sentinel tree will be tagged and inspected on a regular cycle. This tag identifies your tree as part of the voluntary Sentinel Tree Survey Program and ensures that our surveyors know which tree should be inspected. The tags also help our supervisors verify that the inspections have been carried out in a timely manner. Tags are for monitoring and quality assurance purposes only and do not indicate that trees have citrus canker.

What Is Citrus Canker?

Citrus canker is a disease that causes lesions on the leaves, stems, and fruit of citrus trees. While not harmful to humans, it robs citrus trees of their health and vitality. Fruit infected with canker is too unsightly to be sold, and the bacterium that causes citrus canker weakens the trees and makes their leaves and fruit drop prematurely.

Citrus Canker History

Citrus canker was first found in the United States in 1910 not far from the Georgia border. Carried along by wind and rain, the disease spread southward with startling swiftness, reaching Dade County, more than 400 miles away, in just 2 years. Beyond Florida, the pathogen spread throughout the Gulf States and reached as far north as South Carolina. It took more than 20 years to eradicate that outbreak of citrus canker.

From 1914 through 1931, \$2.5 million in State and private funds were spent to control it—a sum equivalent to \$28 million in 2000 dollars. In 26 counties, some 257,745 grove trees and 3,093,110 nursery trees were destroyed by burning in order to wipe out the canker. Now it's back with a vengeance and threatens to invade our most productive citrus groves.

Economic Threat

The value of the citrus industry to Florida's economy is more than \$9 billion annually—an amount that contributes heavily to Florida's financial well-being and tax base. Because it lowers both yields and quality of the fruit, citrus canker can lead to a loss of markets due to quarantines on the transport, sale, and export of fruit from all affected areas in the State. This destructive disease is a scourge that not only threatens the enjoyment of backyard citrus but also the 100,000 jobs dependent on the economic well-being of the citrus industry in this State. The industry is critical to the Nation's fruit basket since Florida alone accounts for about 75 percent of total U.S. citrus production. Breakfast tables everywhere would be affected if citrus canker became established in Florida because it is the world's leading producer of grapefruit.

Survey Effectiveness

The Sentinel Survey Program has proven to be effective for identifying citrus canker and greatly reduces the inconvenience to homeowners while lessening the financial burden of eradication on all taxpayers. Together, we can beat citrus canker and save Florida's trees from this destructive disease.



Figure 3—Fruit infected with canker is too unsightly to be sold, and the bacterium that causes citrus canker weakens the trees and makes their leaves and fruit drop prematurely.

Sentinel Survey Frequently Asked Questions

Q. Why did you select my tree?

A. Accessibility, citrus variety, and location influence tree selection.

Q. Do we pay for this detection service?

A. No. This is a tax-supported service.

Q. How often will the surveyor look at my tree?

A. Every 60 to 90 days, weather permitting.

Q. Do we have to participate in the survey?

A. No. Participation is voluntary.

Q. What happens if you suspect citrus canker?

A. Our field crews take leaf samples and forward them to State plant pathologists for verification.

Q. Can you eat fruit with canker?

A. Yes.

Q. Is there a Web site with citrus canker information?

A. You may consult the Web site at

<<http://www.aphis.usda.gov/ppq/ep/citrus/index.html>>.

***We appreciate your participation
with USDA
in this survey program.***

Contact us at:

Arcadia (863) 491-0538

Avon Park (863) 314-5912

Bartow (863) 533-8859

Clearwater (727) 531-5858

Ft. Myers (239) 278-7520

Ft. Pierce (772) 429-2046

Immokalee (941) 657-4540

Melbourne (321) 255-4747

Naples (941) 261-1539

Orlando (407) 851-5640

Sarasota (941) 358-6309

Tampa (813) 621-4133

West Palm Beach (561) 616-1320

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